



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,909	01/24/2003	Stefano Giuliano	60,126-213	2359

7590 09/21/2004

Gregory D. DeGrazia
The Pinehurst Office Center
Suite #101
39400 North Woodward Avenue
Bloomfield Hills, MI 48304-5151

EXAMINER

EDWARDS, LAURA ESTELLE

ART UNIT

PAPER NUMBER

1734

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/713,909

Applicant(s)

GIULIANO ET AL.

Examiner

Laura Edwards

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4, 5 and 15-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 4, 5 and 15-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 012304.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15, 18, 22, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Takayama et al (US 5,775,598).

Takayama et al teach an atomizer for coating workpieces with a coating material comprising the combination of a cone plate (5) having an axis of rotation and operable to dispense coating material; at least one of a ring body (23) and a housing (3) being concentric to and spaced from said cone plate along said axis of rotation and including an radially outwardly facing surface; at least one electrode (25) embedded or screw-threaded in said one of a ring body and a housing wherein said at least one electrode defines a tip being flush with said radially outwardly facing surface of said ring body.

With respect to claim 22, see end ring (34) in embodiment in Fig. 3.

With respect to claim 23, the housing (3) has at least one groove or recess to receive threading of ring body (23).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 1734

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takayama et al (US 5,775,598).

The teachings of Takayama et al have been mentioned above but Takayama et al fail to teach or suggest the dimensions of the of the cone plate relative to the spray diameter. However, it is within the purview of one skilled in the art to determine, via routine experimentation, the appropriate dimensions of the cone with respect to the spray diameter so as to obtain the desired area of coverage with respect to the workpieces being coated.

Claims 16/4, 17, 19, 20, and 24/5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takayama et al (US 5,775,598) in view of Behr et al (US 4,872,616).

The teachings of Takayama et al have been mentioned above. While Takayama et al teach a single concentric electrode (25), Takayama et al fail to teach an arrangement comprising a plurality of concentrically arranged electrodes disposed about the cone plate. However, it was known in the art at the time the invention was made to arrange a plurality of electrodes concentrically about a cone plate in a rotary atomizer in order to establish a desired electrical

Art Unit: 1734

field as evidenced by Behr et al (see col. 3, lines 21-29). It would have been obvious to one of ordinary skill in the art to provide electrodes in a concentric arrangement as taught by Behr et al about the cone plate in the Takayama et al atomizer in place of the single concentric electrode as an alternative means for evoking the repulsive electrical field which prevents paint deposition which would block the outlet of air.

With respect to the exact number of repulsion electrodes used, it would have obvious to one of ordinary skill in the art to utilize as many electrodes necessary to establish the electric repulsion field.

With respect to claim 4, the combination as defined by above would include a plurality of electrodes establishing a repulsion electric field and while Takayama et al fails to teach the plurality of concentric electrodes and a common concentric or annular conductor, Behr et al recognize the use of a common concentric or annular conductor in communication with the plurality of concentrically disposed electrodes to establish a desired electrical field (see col. 3, lines 36-44). In establishing a repulsion type electrical field using a plurality of concentric electrodes as recognized by the combination above, one of ordinary skill in the art would expect to provide a concentric or annular conductor as recognized by Behr et al in communication with the concentrically disposed electrodes in order to simultaneously charge the electrodes.

With respect to claims 24 and 5, the combination as taught would provide for longitudinally spaced electrodes disposed about the cone plate.

Conclusion

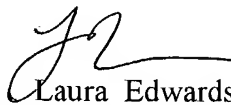
Art Unit: 1734

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents disclose the state of the art with respect to rotary atomizers with insulation about the cone plate: Borner et al (US 6565021).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura Edwards whose telephone number is (571) 272-1227. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Laura Edwards
Primary Examiner
Art Unit 1734

Le
September 17, 2004